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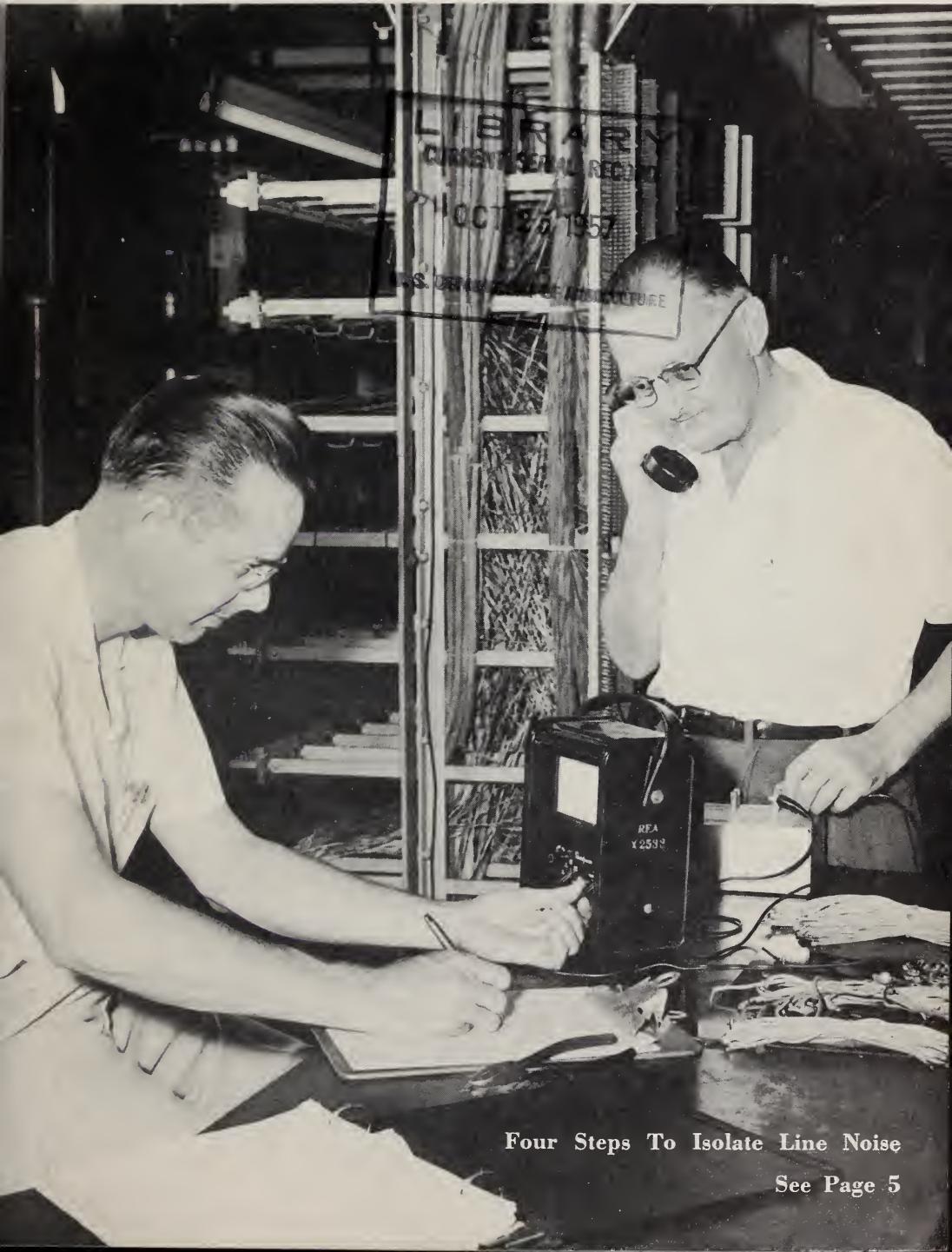
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Rural Lines

RURAL ELECTRIFICATION ADMINISTRATION • U. S. DEPARTMENT OF AGRICULTURE

OCTOBER
1957



Four Steps To Isolate Line Noise

See Page 5



A Message from the

ADMINISTRATOR

Reporting on rumors and actual developments in and out of Congress that might affect the REA program, a weekly magazine news article raises a "fundamental question" about rural electric cooperatives.

"Impinging on the whole picture," the article notes, "is the fundamental question of whether the electric co-op is public power or private enterprise."

I have no quarrel with "public" power, but I know that rural electric cooperatives are private enterprise in its truest sense. My neighbors and I, in Logan County, Colorado, have put so much of our individual time, effort and money into creating and building our Highline Electric Association that we just wouldn't appreciate it being labeled as "public" power by anyone. We own that co-operative, just as the other 926 rural electric co-ops across the country are owned by the 4,100,000 farm and ranch families, rural business people and "city folks moved to the country" that they serve.

The news article mentions other questions involved in the Congressional and public discussions, among them: Should co-ops borrow money for generating plants to serve industrial loads? Should they take on urban loads as cities expand? Should they borrow money at 2 percent which costs the government 4 percent?

When the right answers to these questions are found, I feel certain that the grass-roots members of our cooperatives will have contributed to the finding. I know that they have been considering these and related questions for a long time. I have complete confidence in their intelligence, integrity and sense of civic responsibility, and in their ability and willingness to work with reasonable men in arriving at reasonable answers to questions of mutual and national importance.

Sincerely,

Administrator.

**Veteran Of 20 Colorful Years
With REA, Assistant Administrator**



J. K. O'Shaughnessy Retires

The dean of REA engineers closed his desk drawer with a firm hand last week and walked down to the U. S. Department of Agriculture's auditorium in Washington, D. C., to receive the plaudits of the staff of the Rural Electrification Administration for a job well done. J. K. O'Shaughnessy was terminating 20 years of a 9 to 5:30 routine which helped change the face of rural America.

For longer than any other person, Jack O'Shaughnessy guided the rural electric and the rural telephone programs in accordance with procedures which brought down construction costs and made service available to farm families and other rural people at reasonable rates. No one can measure the considerable savings to each consumer on the lines of REA borrowers which came from economies in building the systems. The determination and desk pounding which brought the costs down also earned Mr. O'Shaughnessy a colorful reputation in the utilities engineering and construction industry.

Joined REA In 1937

The electrification loans program was still new and feeling its way when Mr. O'Shaughnessy joined the REA staff in October 1937. He had already spent a number of years in private utility

work throughout the South and in Mexico after graduating in electrical engineering from the University of Louisiana. He also had served on the staff of the American Telephone and Telegraph Company and had later maintained offices in Washington, D. C., and Maryland as an engineering consultant.

Pushed Aside Obstacles

Mr. O'Shaughnessy used his experience to push aside many obstacles which confronted the first electric borrowers in building their lines. In 1939 he was appointed assistant chief of the design and construction division, which later became the electric engineering division. Mr. O'Shaughnessy was made chief of the division in January 1946 and held that position for 7 years. During this period he was in charge of the engineering and construction program for getting electricity to the farms, an accomplishment involving more than $1\frac{1}{2}$ billion dollars in loan funds. With this money, borrowers reached nearly $2\frac{1}{2}$ million rural consumers.

Proof of Mr. O'Shaughnessy's success in holding co-op construction costs at reasonable levels is evident in a comparison of the construction costs of REA borrow-

ers with costs of electric companies outside the program. Between January 1946 and July 1952, while utility construction costs were climbing about 85 percent, the cost of REA-financed construction increased 44.5 percent.

The insistence by Mr. O'Shaughnessy on competitive bidding, development and improvement of line construction methods, standardized materials and equipment, and maintenance of high standards of engineering and construction involved him in a series of controversies which might have discouraged or worn down some other men. He seemed to thrive on criticism and difficult situations.

Held To Standards

As the volume of construction by electric co-ops soared, Mr. O'Shaughnessy's relatively small engineering staff held to its standards and procedures, to guarantee the high quality that identifies the facilities of REA-financed systems today.

So outstanding was this service to rural electrification that the U. S. Department of Agriculture cited Mr. O'Shaughnessy with its highest honor on May 18, 1954. At a ceremony attended by most of the Department staff as well as by Vice President Nixon, members of Congress and other distinguished guests, Secretary of Agriculture Ezra Taft Benson presented the Distinguished Service Award to Mr. O'Shaughnessy. It was one of two such awards ever made to REA officials.

Mr. O'Shaughnessy's citation was made for "outstanding service to agriculture and rural life

by making electric service available to many additional farms, through significant economies in constructing rural electric lines," and for "outstanding skill in public administration."

By the time of the award, he was heading the agency's rural telephone program. He had been made chief of REA's telephone engineering division in June 1953, and in September of that year he was appointed Assistant Administrator in charge of the telephone program.

It was as Assistant Administrator of REA that he closed his desk drawer on the fourth floor of Agriculture's South Building for the last time on September 27. With 70 years behind him, it was time to retire from the pressure of REA staff work and settle down for the present at his home at 4816 Montgomery Lane, Bethesda, Md.

Will Keep Working

But Jack O'Shaughnessy isn't through working. He has no intention of turning his back on a lifetime of engineering and administrative activity. He is considering several proposals which will keep him busy either in Washington or in his native New Orleans, where he was born in 1887. First, however, he intends to relax on a real vacation and take time to enjoy his family. Besides his wife, Frances, he has two grown children, Marcelle and Charles, and six grandchildren who also live in nearby Maryland.

He will have to take time, too, for reading the letters of appreciation that are coming to him for the fine job he has accomplished.

**Patience And A Procedure
For Checking Will Eliminate**

Noisy Rural Lines

When a subscriber complains about an annoying hum in his telephone or a roar on his line, it's time for some detective work by the manager and his maintenance men.

It is risky—and often costly—to shrug off noise as inevitable. Noisy lines can mean loss of toll revenue, because many people are unwilling to pay long distance charges for conversations accompanied by a high level of interference. Since rural lines have an unhappy reputation for being noisy, subscribers may be somewhat tolerant of noise on local calls. But even here, tolerance has its limits. Occasionally line noise becomes so serious that public relations are seriously harmed. Subscribers on one rural telephone system got so worked up about noisy lines that they actually withheld bill payments, creating a financial problem for the REA borrower.

With perservance, that borrower finally licked his noise problem, and today the system is getting back on its feet. In fact, it was said that the lines now sound like cable pairs. The contrast may have made for over-enthusiasm, but it shows what can be done.



The secret of reducing telephone line noise, say REA telephone engineers, is to eliminate possible causes of noise on a systematic basis. Too often, plant men make tests which are sound enough in themselves, but they fail to pinpoint the trouble because they do not follow a pattern.

If there are several complaints from subscribers, the first step is to determine the scope of the noise. All rural lines should be tested by bridging a telephone handset across each line terminal at the mainframe to make a reverting call. A call also should be made from the central office to each line reporting noise. After isolating the noise, the lines of subscribers making complaints should be tested intensively, one by one. Sometimes, after testing only a few lines, you can discover a common cause for the trouble which makes further detailed testing unnecessary.

There is one guiding principle to bear in mind when working on a noise problem: *Anything that connects directly or indirectly to a telephone pair may cause noise.* The guilty components may be ringers to ground (divided), protectors of any description (including drainage units), and central

PHASE	WHERE TESTS ARE PERFORMED	EQUIPMENT REQUIRED	MAJOR ITEMS TESTED
A	At C. O.	—Wire Chief's Test Set. —A. C. voltmeter. —Balanced Termination.	—Outside plant shorts, opens, grounds and crosses. —Possible station equipment unbalances. —Possible C. O. unbalances.
B	Along line with Balanced Termination at C. O.	—Balanced Termination.	—Leaks to ground. —Protectors. —Transposition system.
C	Along line with Balanced Termination at C. O.	—Balanced Termination.	—Ringers.
D	Along line with Balanced Termination.	—Balanced Termination. —D. C. resistance bridge. —Megger.	—Individual taps. —Station equipment. —Line resistance unbalance. —Leaks to ground.

Test Phases in Isolating Causes of Noise in a Subscriber Line.

office equipment. Like the butler in detective stories, this last suspect is too often overlooked.

Other sources of noise include poor splices, insect-ridden cable terminals, cracked insulators, and brush on the lines. The list could go on and on, illustrating the importance of attacking the noise systematically.

The accompanying table shows a step-by-step pattern for isolating causes of noise. Undoubtedly, experienced plant men can offer alternate methods that are just as workable. According to borrowers who have reduced noise, the important thing is to have some plan to follow.

The order in which tests are recommended in the REA table is based on two principles: (1) It is easier to test from the central office than from any other point in the plant, and (2) shorts,

opens, grounds and crosses are more apt to be guilty than high resistance leaks to ground. The latter can be uncovered only by a megger, an instrument for measuring very high resistances at high voltages.

Observe that no complicated, expensive instruments are required for any of these noise detection tests. The balanced termination, for example, is simple to build. It consists of a repeating coil plus a few easily procured radio parts. Its circuit, along with complete procedures for reducing noise, is described in detail in Section 1356.7 of the REA Telephone Operations Manual.

For all tests except those in Phase A, two, or preferably three, men are needed, since one must monitor at the central office while suspected causes of noise are being isolated in the line. Most tests should be supplemented by trial

telephone calls to observe any changes in noise level.

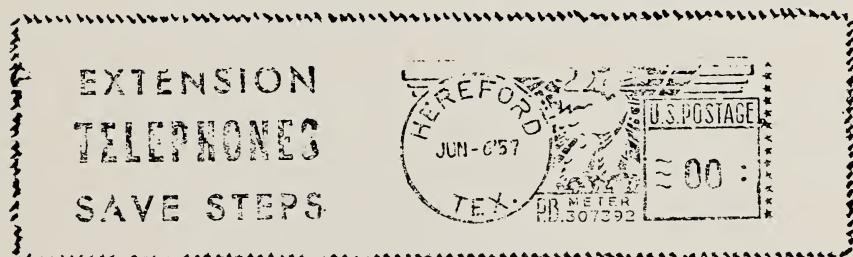
In setting out to clear up noise, it's a good idea to remember that there are plenty of old wives' tales about interference on telephone lines. Only a few have basis in fact. It is true that noise is to be expected, more or less, on one-wire magneto farmer lines. But statements like, "We must expect noise because we are on joint use," are less true as far as dial systems are concerned.

In some systems, there is a tendency to blame everything on the power system and the telephone line transposition system. It is perfectly true that if there were no rural electric lines, there would be no noise of the sort described here. (It would also be true if there were no farmers' telephone lines!) Obviously, such an approach is useless. The real question to answer is this: Do electric lines make noise inevitable?

Early in REA's history, engineers found that some types of equipment tended to bring about noise conditions. As a result, they tightened specifications on power equipment. Since that time, there have been few cases of components in the power system causing telephone noise which couldn't be corrected by sound telephone engineering and maintenance.

Are transpositions necessary to prevent noise? On practically all lines, the answer is "yes." However, out of all the serious subscriber noise conditions that have been brought to REA's attention, not one was caused primarily by the transposition system. True, these transpositions had been placed in accordance with the REA Telephone Engineering and Construction Manual. But even when minor errors had been made, these transposition mistakes did not dominate the noise situation.

Postage Meter Slogans Sell Extension Phones



Slogans used in the postage meter imprint help sell extension telephones for the West Texas Rural Telephone Cooperative, at Hereford, Texas. The advertising message can be altered from time to time as promotion objectives change. Cost of each new custom-made postage meter plate is about \$15, making this an inexpensive advertising medium to use in promoting telephone service.

Ability Of Telephone Borrower To Offer Service Within Budget Is

First Test of Good Management

The ability of a telephone borrower to operate within its means to achieve ultimate aims established in its budget is the first test of good management. Yet many firms, lacking any sort of budgeting procedure, are still unable to apply this essential test to their own operations.

Budgeting is the only known method for properly managing and controlling the financial and operating affairs of any business. And in telephone operations in particular, the difference between planning and guesswork can mean the difference between earnings and deficit.

Mistakes Are Costly

In a typical telephone company, there isn't much room for error. In some operations, for example, it takes 50 percent of the gross revenue to pay interest and principal to REA on schedule. Of the remaining 50 percent, about 18 percent goes for maintenance and about 25 percent for commercial, general office and other expenses. This leaves a balance of only 7 percent available for taxes, dividends, other interest and replacements and additions to plant. Obviously, there is a big need here for prudent fiscal management.

Specifically, an operating budget can do these things for any firm:

► It can point up spots where operating expenses must be reduced or revenues increased.

► It offers management clear-cut goals, allowing operation within the resources of the organization.

► It permits evaluation of the efficiency of each operation.

► It may point up the necessity for rate adjustments before deficit operations occur. Since rate adjustments are never retroactive, each delay represents revenue lost forever.

Analyze Your Costs

A budget also permits careful analysis of expenditures. There is more than meets the eye to the dollar and cents figures on an operating statement. A company that has started budgeting can use page 2 of REA's Quarterly Operating Report to find out what's behind its figures. Each of these 3 analytical techniques is a valuable source of figure-facts:

Analysis 1: Actual as a Percent Increase or Decrease of Budget, in column (c), is a measure of management's ability to predict conditions affecting future operations. Results are presented as the percent that actual expenditures vary from estimates in the budget. The sample analysis form shown in this article illustrates a satisfactory job of budget planning. Revenues were budgeted conservatively and total operating expenses came out almost on the nose, resulting in an increase in the net margin.

Analysis 2: Percent of Revenue, in column (d), indicates the firm's

ability to control variable operating costs, as opposed to fixed operating costs. In the example, 40 cents out of each revenue dollar must go for fixed cost items like taxes, depreciation and interest. The remaining 60 cents is

available for payroll, maintenance, material, truck travel, postage, heat and the many other items essential to operation. If there is going to be a margin or profit, it must also come out of that 60 cents.

Page 2 of REA Financial Report used as monthly analysis sheet.

U. S. DEPARTMENT OF AGRICULTURE RURAL ELECTRIFICATION ADMINISTRATION		Budget Bureau No. 40-R2530.3 Approval Expires January 31, 1960			
FINANCIAL AND STATISTICAL REPORT FOR TELEPHONE SYSTEMS					
INSTRUCTIONS: Submit original and three copies to U. S. Department of Agriculture, R.E.A., Washington 25, D. C. For detailed instructions see REA Bulletin 408-1.		SYSTEM DESIGNATION Anytown, U.S.A.			
		X-OPERATING EXPENSES Month of October, 1957			
PART C. OPERATING STATEMENT X-OPERATING EXPENSES BUDGET					
ITEM	THIS MONTH ACTUAL (a)	BUDGET MONTHLY ALLOWANCE (b)	X-OPERATING EXPENSES % of Revenue \$/Station (c)		
	ACTUAL (\$)	% of Budget (d)	Annual (\$/Station) (e)		
1. LOCAL SERVICE REVENUE.....	9318.15	9300.	+ .2	74.4	65.22
2. TOLL SERVICE REVENUES (Gross \$ 7213) *NET	3110.70	3005	+ 3.5	24.8	21.77
3. MISCELLANEOUS OPERATING REVENUE.....	138.60	125	+ 10.9	1.1	.97
4. UNCOLLECTIBLE OPERATING REV'S, DEBIT.....	36.80	48	- 23.3	.3	.26
5. TOTAL OPERATING REVENUES (Line 1+2+3-4).....	12530.65	12382	+ 1.2	100.0	87.70
6. MAINTENANCE EXPENSES.....	2340.10	2300	+ 1.7	18.7	16.38
7. TRAFFIC EXPENSES.....	228.45	235	- 2.8	1.8	1.60
8. COMMERCIAL EXPENSES.....	635.70	690	- 7.9	5.1	4.15
9. GENERAL OFFICE SALARIES & EXPENSES.....	1730.55	1650	+ 4.9	13.9	12.11
10. OTHER OPERATING EXPENSES.....	918.95	975	- 5.7	7.3	6.13
11. SUBTOTAL OPERATING EXPENSES (Lines 6 to 10).....	5853.75	5850	- 0-	46.8	40.97
12. STATE AND LOCAL TAXES.....	302.20	325	- 7.0	2.4	2.11
13. FEDERAL INCOME TAXES.....					
14. OTHER FEDERAL TAXES.....					
15. TOTAL TAXES (Total lines 12 to 14 incl.).....	302.20	325	- 7.0	2.4	2.11
16. DEPRECIATION & AMORTIZATION EXPENSES INCLUDING \$ 230 AMORTIZATION EXP.	2358.70	2280	+ 3.5	18.8	16.51
17. TOTAL OPERATING DEDUCTIONS (Lines 11+15+10).....	8511.65	8155	+ .7	68.0	59.60
18. NET OPERAT. INCOME OR MARGIN (Lines 5-17).....	4016.00	3927	+ 2.3	32.0	28.11
19. OTHER INC. & DEDUCT'S. NET CREDIT (DEBIT).....	(13.00)	--		.1	.09
20. AVAILABLE FOR FIXED CHARGES (Line 18+or-19).....	4003.00	3927	+ 2.3	31.9	28.02
21. INTEREST ON LONG TERM DEBT.....	2373.50	2413	- 1.6	18.9	16.61
22. INTEREST CHARGED TO CONSTN'N CREDIT.....	-0-	-0-			
23. OTHER FIXED CHARGES.....	-0-	-0-			
24. TOTAL FIXED CHARGES (Lines 21+23+22).....	2373.50	2413	- 1.6	18.9	16.61
25. NET INCOME OR MARGIN (Line 20-24).....	1629.50	1514	+ 7.6	13.0	11.41
26. UNAPPROPRIATED EARNED SURPLUS OR MARGIN BEGINNING OF YEAR.....					
27. MISCELLANEOUS CREDITS - YEAR TO DATE.....					
28. DIVIDENDS DECLARED (Common \$ _____) (Preferred \$ _____).....					
29. OTHER DEBITS - YEAR TO DATE.....					
30. UNAPPROPRIATED SURPLUS OR MARGIN END OF PERIOD (Total lines 25+26+27 less lines 28+29).....	19.2 %	49.9 %	%	%	%
31. RATIO (Line 11+15 divided by Line 5).....	87.0 %	87.8 %	%	%	%
32. RATIO (Line 17+24 divided by Line 10).....					
REMARKS:					
CERTIFICATION					
We hereby certify that the entries in this report are in accordance with the accounts and other records of the system and that the report reflects the status of the system to the best of our knowledge and belief.					
DATE		MANAGER			
DATE		BOOKKEEPER			
* During this quarter † Use optional - See instructions					

CERTIFICATION

CERTIFICATION
We hereby certify that the entries in this report are in accordance with the accounts and other records of the system and that the report reflects the status of the system to the best of our knowledge and belief.

BATH

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DATE

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* During this quarter † Use optional - See instructions

The Percent of Revenue analysis, while informative on a current basis, is even more valuable when compared with prior periods. Then the changes and reasons behind the changes can be studied. In the long run, it is desirable to have variable expense items continually on the decrease—assuming that no necessary work is being deferred. This is not always attainable, and a Percent of Revenue analysis is a good quick indicator of something going wrong someplace.

Analysis 3: Annual Dollars per Station, in column 5, is the primary measure of business activity in the telephone industry. It enables management to compare each of its own company's operations with averages for the industry. It also serves as a measure of growth within a company. The most desirable objective, of course, is steadily increasing per station revenues, coupled with decreasing per station expense.

Each Analysis Useful

All three of these analyses are useful. The particular analysis or combination which best serves your operation depends on your special needs and the approach to operations analysis taken by the manager and board of directors.

The budget procedure followed should be based on written policy adopted by the board of directors. This policy should clearly define the methods for checking results. For example, a statement might read as follows:

Statement of Budget Policy

General: It is the policy of the Rural Line Telephone System to

evaluate past operations and forecast its future operating position in keeping with its responsibility to serve its subscribers at reasonable rates and to preserve and enhance the investment of its owners.

The budget shall state the estimated annual revenues by sources and expenditures by purposes in accordance with applicable account titles. The budget shall provide revenues to cover all current and accrued expenditures including interest, taxes, depreciation and a net income or margin sufficient to continually increase ownership and ownership rights within the maximum scope of regulatory rules and restrictions. Depreciation shall be computed and recorded at component rates presently established.

Budget Committee: It shall be the responsibility of the executive committee consisting of the president, secretary-treasurer, and manager to recommend a budget for each calendar year. The budget shall be presented to the board of directors at a regular board meeting on or before December 1 each year.

Duties: It shall be the duty of the manager to compare actual operations with budget estimates each month. A report shall be presented to the board of directors at each regular monthly meeting. Reasons for substantial deviations from estimates shall be reported in detail. It shall be the manager's duty to formulate and recommend plans for corrective action when necessary. Rate adjustments or major adjustments in expenditures shall be approved by the board.

Rural Lines

RCA

ELECTRIC INDUSTRY'S

1958
POWER USE



See Pages 12 and 13

ELECTRIC IND



	JAN	FEB
*ELECTRIC LAUNDRY	●	●
*HOUSEPOWER		●
*NATIONAL ELECTRICAL WEEK		9-15
*ELECTRIC RANGES		
*ELECTRIC WATER HEATERS		
*ELECTRIC DISHWASHERS		
*ELECTRIC HOUSEWARES		
*FOOD FREEZERS—REFRIGERATORS		
*AIR CONDITIONERS—DEHUMIDIFIERS		
RESIDENTIAL LIGHTING		←

	JAN	FEB
BROODING	X	X
WATER HEATING		
CROP DRYING		
SPRINKLER IRRIGATION		
WATER SYSTEMS		
FARM FREEZERS		
FARM CHORE EQUIPMENT		
FARM LIGHTING		
*VENTILATION		
ELECTRIC HEAT APPLICATIONS		
FARM WIRING		←

* Special promotional materials
be offered to power suppliers
vance. Rural power distribu
Industry Councils from 4 t

TRIES 1958 PROMOTIONAL *Calendar*

APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
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APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
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X				X	X			
					X			
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							X	
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								X



be available for these items. To hold down costs, these will be printed, with only as many printed as are requested in advance. It is suggested that power companies pool orders with their power suppliers or State Interconnection companies months before the beginning of the promotion period.



"We Build Load by Merchandising"

Says Livingston At Denver

TO

SELL APPLIANCES DIRECT

Our own merchandising serves members in four ways. (1) We help them go "all electric" and in that way benefit from the lowest possible rate block. (2) We offer them savings on electrical equipment and appliances. (3) Members get maintenance service on their equipment bought through the co-op. (4) We handle our own financing, so that carrying charges are much cheaper.

Too many dealers simply wait for customers to come in. They have forgotten the art of selling and lack training in marketing electrical goods. In some rural areas, appliance dealers are more interested in pushing appliances which use competitive fuels.

Along with the sale of appliances, the rural electric co-op is in a position to advise members how to use their electrical equipment properly to get the best service from it. Dealers could do this, but too many of them don't.

There is nothing wrong with competition. Merchandising by a co-op to its own members may stimulate dealers in the area to do a better job. We want to work with the dealers and could help them for our mutual advantage, if the dealers are willing to do an adequate selling and service job.

—Elvin Livingston, Sales Manager,
Southern Pine Electric Power Association,
Taylorville, Miss.

Vermont Co-op Merchandises As A Service to Consumers

The phrase "serving our members," as used at the Vermont Electric Cooperative, has a double meaning, according to Walter Cook, manager. This rural electric system, located at Johnson, not only provides reliable electric service to its more than 2,000 members, but also carries a stock of high quality appliances and equipment, some difficult to locate anywhere else in the area.

Several years ago the co-op hired Henry A. Parker, Jr., as electrification advisor. The board of directors expected Mr. Parker to be more than busy helping farmers use their new electric equipment effectively.

Soon, however, they realized that few local dealers were stocking much heavy equipment, and the board decided the co-op should start merchandising. The directors knew that this would not only give co-op members much-needed service, but would help build load for Vermont Electric—a basic requirement for any electric system.

The results have been outstandingly successful. During 1956 the appliance division did a \$100,000 business. During the first 6 months of 1957 the co-op

(Continued on page 16)

"Dealers Are Helping Us Build Load"

Wick Tells Power Use Workshop



OR

WORK WITH DEALERS

Here Is Why An Indiana Co-op Quit Selling Appliances

Three years to the day from April 1, 1954, to April 1, 1957 Southeastern Indiana Rural Electric Membership Corporation, Osgood, Ind., sold a full line of appliances. Then it stopped.

Why this REMC went into merchandising, and out again, is a story of the "pro's" and "con's" of co-op appliance selling, with accent on the "con's." The co-op gives these reasons for stopping its sales:

(1) The organization was formed in the first place to distribute and sell electric power at reasonable cost to its 8200 members in 7 counties—a full-time job.

(2) Selling, installing, and servicing equipment added extra work in all departments, and it greatly complicated bookkeeping.

(3) The co-op's member relations department was unable to perform many of its most important functions along with a sales program.

(4) Public relations problems with dealers resulted from sales activities.

(5) The need for merchandising disappeared.

At year-end in 1953, Manager Frank Rath became alarmed about the co-op's slow load growth

(Continued on page 17)

Rural electric cooperatives were set up to furnish electricity to members. We were not organized to go into the merchandising business and we should stay out of it.

Dealers have personnel, space, and trade contacts already established. For a co-op to handle appliances there would be additional operating expenses, extra bookkeeping and diversion of management's attention from the primary responsibility of providing electric service.

Co-ops can maintain better member relations by leaving merchandising, with all of the purchaser irritations that go along with it, to the appliance dealers.

We can help dealers and our own members by furnishing promotional material on electrical equipment and appliances. Most of the rural electric co-ops are doing this. They put on "In the Home" and "On the Farm" demonstrations and cooking schools. They mail dealer literature to their members, and furnish prospect lists to dealers.

Work with dealers affords an opportunity to build solid support for the co-op among businessmen in nearby towns. This strengthens the co-op and protects the interests of the members.

—Leon L. Wick, Manager, The Western Cooperative Electric Association, Wakeeney, Kans.

Vermont Co-op Merchandising

(Continued from page 14)

sold as many major appliances as during the entire preceding year.

Vermont Electric Cooperative does not simply put merchandise in stock and wait for its members to come and buy it. Manager Cook and the co-op's staff work up a real campaign. For example:

WATER HEATERS. Through a special \$2 per month "rental" plan, 200 heaters were added in 2½ months last spring to the 400 already on co-op lines. Water heaters have continued to sell steadily throughout the year.

BARN VENTILATORS. More than 200 have been sold in the past 2 years. The co-op installed most of them on a trial basis, with satisfaction guaranteed or removal promised. Only one has been taken out. With every sale the co-op promises once-a-year cleaning and oiling of the motor. No dealer in New England has equalled the co-op's business.

MILK COOLERS. The co-op has 73 milk coolers on its lines. With the installation of every water heater purchased from the co-op, wiring for an ice bank milk cooler is provided without cost. Tying together the purchase of water heaters and milk coolers has increased sales of both.

Vermont Electric has promoted sales of electric ranges, refrigerators, food freezers, and many other appliances with success.

A standing offer provides 1 year's free service on any appliance bought from the co-op. But to assure keeping service calls at a minimum, the co-op runs its

own performance tests on all equipment it stocks. In addition it takes the responsibility for wiring inspection and proper installation of all equipment. Furthermore, back in 1950 the co-op inaugurated a preventive maintenance program. This cuts down the outages and keeps the system in better condition.

Last year Vermont Electric provided almost \$17,000 worth of free wiring service to its members on major appliances they purchased from the co-op. (This includes the cost of labor and mileage.) Manager Cook and the board consider this a good investment in member relations, as well as safety insurance. It often affords a chance to correct wiring deficiencies and to increase capacity. Unquestionably this expenditure is more than offset by the continuing upward trend in power use and revenues.

To dramatize this free service and help members realize their actual saving in dollars, the co-op sends out a bill stamped "Paid" on every wiring job, showing a breakdown of the installation "charges." Mr. Cook says, "No one asks for an adjustment!"

Farm use of power on the co-op's lines is going up, of course. It averaged 366 kwh a month in 1955, rose to 417 kwh a month in 1956 and still is increasing.

How do other electric dealers in the area feel about the co-op's merchandising setup? Mr. Cook says: "Well, we're all still friends. The other dealers know we are responsible for many of their sales, and furthermore they get a real advantage out of our advertising and promotional campaigns."

Co-op Quit Selling

(Continued from page 15)

and financial trends. A week's survey trip to nearby distributors convinced him that dealers were inactive. Only 43 electric ranges had been shipped during 1953 into all of Southeastern Indiana; most of the 129 dealers in the co-op's area were selling both gas and electric equipment.

Faced with facts, the board of directors established merchandising as policy. Manager Rath obtained a franchise for a full line of "white goods" and placed an initial order for more electric ranges than had been sold by all dealers in 1953.

Southeastern Indiana REMC launched an aggressive merchandising, educational, and publicity program to combat competitive fuels and sell appliances. Earl Littell, manager of the member relations department, and Lester Brown, electrification adviser, handled sales. Mildred Peters, home economist, conducted kitchen parties, cooking schools, and programs for women's clubs and youth groups.

Sales Were Phenomenal

Co-op sales figures were phenomenal, compared with previous sales records of dealers. When REMC members saw electric equipment's advantages demonstrated, they bought electric equipment.

Almost immediately, dealers' sales began to jump upward. One key dealer, whose total sales had been 3 ranges in 1953, sold 12 ranges in the first 3 months after the co-op started selling.

Sales by dealers increased steadily during the co-op's 3-year merchandising venture. In 1956 total dealers' sales finally outstripped REMC sales. Dealers sold 139 ranges to the co-op's 72, and 139 water heaters to the co-op's 34. The increase in dealers' sales is attributed to co-op competition and a strong power use program for members.

Co-op competition in appliance sales created a public relations problem in the larger community. Ill feeling toward the co-op developed among dealers and spread among other business interests, even though the co-op steadfastly maintained that it never intended to merchandise, that it was forced into it. The co-op offered dealers assistance with wiring and charged retail prices for its equipment; it tried to be fair, cooperative, and helpful. Nonetheless, the practice of merchandising was building a "town vs. country" attitude and anti-co-op feeling.

When Southeastern Indiana REMC decided to stop merchandising, it offered a 12-point program for consideration by dealers. Dealers accepted the proposal, which included cash awards to dealers for range and water heater sales and 30-amp-service change-outs, and co-op help for demonstrations and promotion.

To carry out its part of the bargain, the member relations department of the co-op launched a program of dealer meetings, a series of dealer-sponsored cooking schools for members and other educational activities.

In return, "The dealer will see that the wiring is done and notify the REMC when an appliance is placed for inspection."

**Movies, Parades, Contests And
A Trailer Sell Power Use For**



The Showmen From Sho-Me

If an excited talent scout ever drags a power use worker in for a television audition, you can almost bet it will be one of the co-op showmen from south central Missouri.

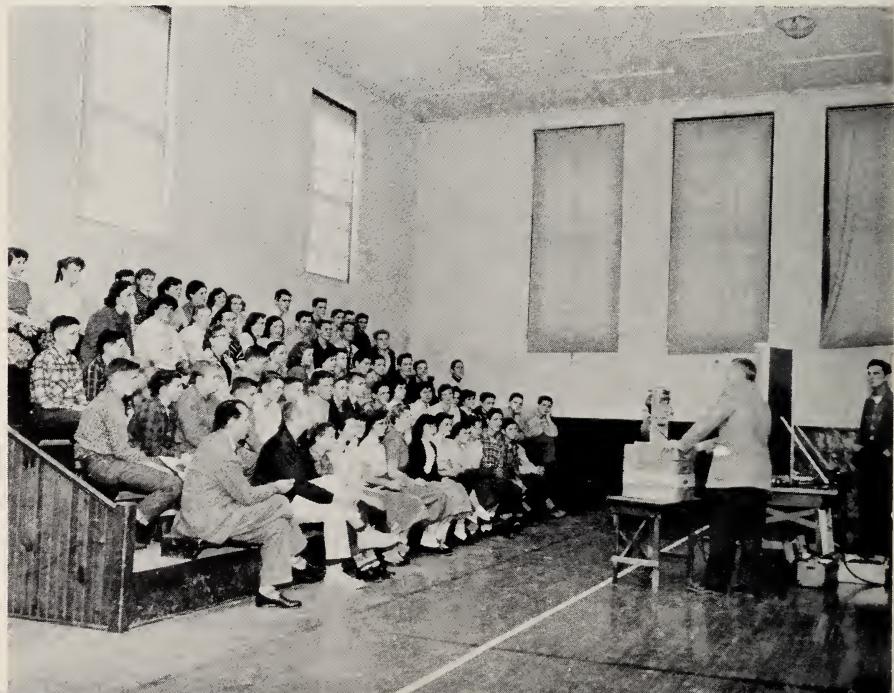
The men and women who promote kwh consumption for Marshfield's Sho-Me Power Corp. and its nine member cooperatives have mastered the art of presenting electric power use education so captivatingly that it is billed—and accepted—as entertainment. New and repeat invitations from civic and luncheon clubs, church organizations, schools and farm groups convince the Missourians that they are on the right track.

Using panels suitable for either students or professors, Gascosage Electric Co-op's Manager Luther Riddle conducts demonstration at Dixon High School. More than 40,000 have seen the show.

Power sales support their conviction. Despite drouth and other slowdown factors, Sho-Me sales to member distribution co-ops have advanced steadily during the past few years.

Don't be misled. These showmen from the Ozarks country are ordinary working folks, not professional entertainers. But they work hard and conscientiously to polish their performances and to develop better means of boosting electricity as a farm and home helper.

A visit to one of their bi-monthly training meetings confirms this. Here the power use specialists try out their "acts" on



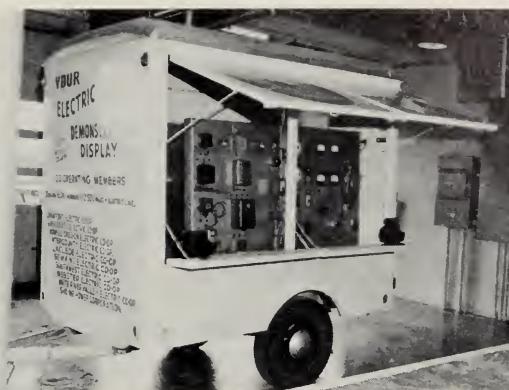
each other—as critical an audience as they will find anywhere. These regular get-togethers also serve as idea exchangers, helping to keep power use advisers posted on the latest developments. Their main purpose, of course, is to develop coordinated and effective power use programs.

Here's the program of one recent meeting:

- Demonstration on lighting, small appliances, and electric wiring.
- A report, illustrated with color slides, of a visit to Norfolk Dam, an annual event sponsored by Howell-Oregon Electric Cooperative, West Plains, Mo.
- Review of work with youth groups to promote proper use of electricity.
- Preview of a film made by Sho-Me for the Missouri State Poultry Experiment Station.

As the program suggests, Sho-Me workers go in for public relations activities in a big way. They believe that power use education, good public and member relations, and promotion of civic events all contribute to load building. And they back up this belief with enthusiasm and action.

Any town that dolls itself up for a centennial or similar festival comes under the scrutiny of Sho-Me's still and movie cameras. There's a double purpose in this: The slides and movies can be used on the "educational entertainment" circuit, and the evidence of Sho-Me's interest in each community event builds good public relations. Sho-Me or one of its member co-ops is usually repre-



Sho-Me's jaunty power use trailer turns up at annual meetings, fairs and dairy days, and festival parades in the Missouri Ozarks.

sented on these occasions by the bright Sho-Me trailer or a special float or exhibit.

Sho-Me's film library now includes movies of rodeos, dairy festivals, a dogwood festival, an international square dance, fox hunts, and dog shows. The films win warm interest when shown at general meetings and demonstrations.



Smooth as a magician, Sho-Me's J. Spinabella rotates remote control panel board to show wiring scheme. Other custom-designed panels are on stage.



Mrs. Frieda Fielder, home economist of Webster Electric Co-op, goes into her "act" of preparing 6 different menus using only small appliances.

Work with schools takes top billing with the Sho-Me group. Co-op power use advisers and home economists appear regularly before vocational agriculture, home economics, science, and industrial arts classes in the area. So flexible is the material and equipment used as props in these demonstrations that it can be used effectively with sixth graders, a college engineering class, or a meeting of professional engineers.

Among the props are seven panel boards which can be used by a speaker to demonstrate the device or applications he is discussing. During the past two years, more than 40,000 men, women, and children have seen these panels. One of the newer ones represents the floor plan of a modern residence equipped with remote controls for lighting and attic fans. The back of the panel can be removed to show the circuits and special equipment used in the demonstration. Other panels

deal with electric heating, lighting, wiring, electric motors, switches and fuses, and circuit outlets (plugs and sockets).

Warren Johnson, Sho-Me's director of power use and public relations, finds that interest in the panel demonstrations is widening. School administrators, for example, like the clear and concise form in which information is presented. For their part, the kids "eat it up," for it is as amusing and lively as a color cartoon. When it can please both teacher and pupil, it must be good.

Last year Sho-Me built a new school program—this one for the girls—around the electric skillet. Knowing that small schools are short of money to acquire new appliances, Sho-Me gave a new skillet to each of the nine high school home economics departments in its area. Home economist Grace Allen introduced it to food and nutrition classes.

Offered Prizes

To stimulate interest in the program, Sho-Me offered a prize to the girl in each school who offered the best demonstration in the care and use of the skillet. Prizes, naturally, were electric skillets. Competition was lively and the contest gave the chance to apply their knowledge of foods, nutrition and homemaking.

Early this month, the showmen from the Ozarks finally got a chance to show the nation what they could do. They were invited to give a demonstration before electric industry management attending the 4th Annual National Power Use Workshop Conference in Denver.

**Nebraska Electric Council
Suggests Home Visits To Sell**

KWH To Low Users

Friendly personal calls may be a better bet than newspaper or direct mail advertising for increasing kwh consumption of the lowest quarter of your system's consumers.

So concludes the Nebraska Inter-Industry Electric Council after checking results of its recent low-user survey in one system's service area. Choosing the Southwest Public Power District in Palisade for a pilot study, the Council sent interviewers to a sample of the 190 farm and 250 town residential consumers using less than 100 kwh a month. Southwest's average farm consumption is 331 kwh; the average town home uses 216. Interviewers also talked to the 30 electric dealers in the area.

Sought Two Answers

The survey had two aims: (1) To reveal why 20 to 30 percent of the rural and small town consumers on many REA-financed systems consume less than 100 kwh a month, and (2) to aid in developing a practical program for encouraging low users to make increased use of electric appliances.

Here's what interviewers learned. The low consumers in Palisade are elderly and conservative. Sixty-eight percent are over 60 years old, and all but 4 percent are over 40. Most of them do little reading, attend no educational meetings.

Income is low and not likely to

increase. Roughly half depend on relief checks, old age pensions, investment returns or retirement pay for the main part of their income. The other half are full or part-time laborers.

The low users on farms, while not as old a group as the town consumers, nearly all are over 40. More than half own their own farms, which average 750 acres, and three-fourths of them depend



entirely upon farms for their livelihood. Since they produce chiefly livestock and feed, 4 years of drouth have cut sharply into their incomes.

In both farm and town homes, there is little electric and running water equipment. However, saturation of LP gas equipment is high, even in refrigeration. Both quality



and quantity of lighting is inadequate, although wiring generally seems adequate for fuller use of electric equipment.

The task of increasing kwh consumption in these low-use homes seems far from hopeless to the Council. Encouraging is the interest expressed by many in owning additional electric equipment. For example, 21 percent of the farm consumers interviewed said they would like to have home freezers; 15.7 percent want water pressure systems and welders; 10.5 percent would like to own electric blankets and automatic washers.

Town users were less enthusiastic, but 12 percent want water heaters and 8 percent would like to own electric ranges. A few mentioned television, hand irons, freezers, waffle irons and bath-rooms.

Business Was Slack

The 30 dealers in the Palisade area, unanimously reported business was slack. They admitted that they make few house-to-house sales appeals. To advertise, over half use newspapers, about half use radio, less than half use TV at all. But 4 dealers who said they call on farmers directly reported that it pays in sales.

The majority of stores visited handle all types of merchandise

and sell what is selected by the customer. Most were cluttered and lack space for proper display and demonstration of major electric appliances. All dealers said used equipment is difficult to move.

Practically all agreed that plenty of credit is currently available, although one-third felt that lower interest rates of 4 to 5 percent might stimulate sales. Rates in use varied from 6 to 13 percent. Only a few dealers thought buyers were already at the maximum safe limit of indebtedness.

Suggest Promotions

After studying survey results, the NIIE Council has come up with these low-user promotion suggestions for REA-financed system:

- Purchase inexpensive, do-it-yourself 150-watt lamp kits, extra 100 and 150-watt bulbs, and electric fry pans and roasters.
- Since advertising seems to produce few results, make personal call on each low user to secure a week's trial of lamps, skillet, or roaster. When employee calls again, he can offer a reasonable financing plan through the system or a reliable dealer. He also should attempt to replace 40-watt bulbs and empty sockets with larger bulbs at little or no cost.
- Find one or two reliable dealers in area willing to recondition used major electric equipment and to guarantee it to give satisfactory service. Discuss the advantages of electric appliances with each user, observing what is needed in each home.
- Confer with Extension agents on ways of improving economic and living conditions of low users.

SAFETY



Electric Shock Toll Is Increasing

Electric shock killed 8 employees of REA electric borrowers during the first 6 months of this year, compared with 3 deaths during all of 1956. A single truck-passenger train collision took the lives of 3 men, bringing the total number of fatalities during the first half of the year to 11.

Deaths from electric shock occurred this year under the following circumstances:

- A lineman grasped a 7200 v primary phase with his hand, wearing only a rubber glove.
- While helping the victim lower a pole into the ground, an assistant pulled the wrong hydraulic lever, bringing the boom into contact with energized conductors overhead. The current passed through the truck and to the victim's body.
- Working on an oil circuit breaker, a lineman reached up and hooked a hand line over a hot wire.

CLASSIFICATION OF FATALITIES AND LOST TIME INJURIES TO BORROWERS PERSONNEL
ACCORDING TO FUNCTION AND CAUSE OR RESULT
JANUARY 1, 1957 THRU JUNE 30, 1957

FUNCTION	CAUSE OR RESULT										PERCENT OF TOTAL	
	TOTAL	FATAL	LOST TIME	ELECTRIC SHOCK	FALLS	STRUCK BY	LIFTING	USE OF HAND TOOLS	POISON IVY	POLE HANDLING		
TRANSPORTATION	8	3	5								8	6
CONSTRUCTION OPERATIONS & MAINTENANCE	86	8	80	16*	18	13	9	5		10	13	68
RIGHT OF WAY CLEARING	26		26		4	7	2	8	2		3	20
MISCELLANEOUS	8		8				1	3	1		3	6
TOTALS	130	11	119	16	22	21	14	15	2	10	27	100

OBSERVATIONS

The detailed review of these fatalities and lost time injuries indicates that the largest percent of all such incidents are directly caused by human failure. They are caused by employees being in a hurry, trying short cuts or maybe even not knowing and understanding the hazards of their job.



BACK THE ATTACK ON TRAFFIC ACCIDENTS



USE PROTECTIVE EQUIPMENT



LEARN HOW TO LIFT



USE TOOLS AND EQUIPMENT PROPERLY

STOP INJURIES caused by HUMAN FAILURE and we would have one of the best records in the country.

FREQUENCY RATE 4.8

SEVERITY RATE 2773 (Based on total estimated manhours worked projected from the subsample of 202 borrowers).

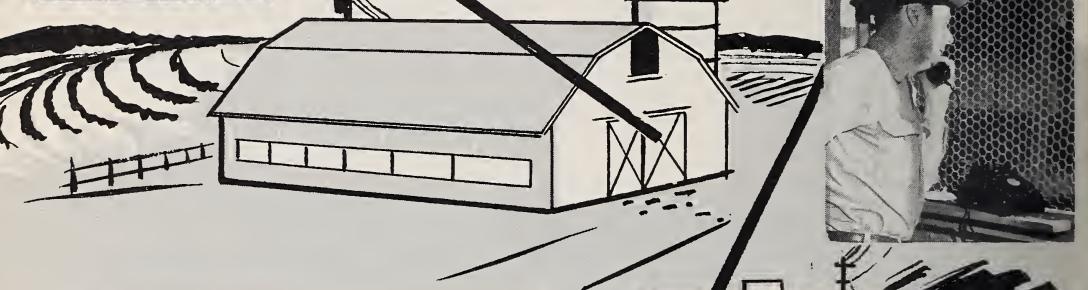
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